## HUMAN FERTILITY.

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Eugenists agree that the rising generation is largely recruited from the less fit. This is attributed partly to the fact that the upper classes marry later and partly to the fact that apart from the question of postponement of marriage the upper classes are less prolific than the lower.

There can be no doubt that at the present time the smaller fertility of the upper classes is almost entirely due to artificial limitation, but there is another cause of their smaller fertility, and it is to this I wish to direct attention. It is important for the Eugenist to know to what cause he is to attribute this smaller fertility of the upper classes; if it is entirely due to artificial limitation, which is merely a temporary fashion, the consequences are not likely to be very serious, since the fashion for limiting the family is likely to take the usual course and spread downwards in the community, eventually equalising the fertility in all ranks of society; or the fashion may die out altogether when its disastrous effect on the future of the race is perceived. It seems also possible that the advantage of limiting the family will appeal more to the poor than to the rich, for an additional child is a greater burden to the poor, and perhaps eventually the artificial limitation of families will have a beneficial effect on the race by reducing the size of the families of the less efficient.

If, however, as I shall try to show, there is a natural tendency under modern conditions for the more intelligent to become less fertile, the problem is a more serious one.

If variations in fertility are inherited and the wealthier classes have for generations been put through a process of selection by which members of small families have been given an advantage over members of large families, we should expect that the wealthier classes would, as a whole, be less fertile than the poorer classes.

Now, there is some indication that variations in fertility are inherited. Members of small families have themselves small families. Galton found that 100 peers who had married heiresses had by them 414 children, while another 100 peers whose wives were not heiresses had 620 children.

There are two ways in which members of small families are given the preference in the selection of parents for the wealthier classes.

In the first place members of small families in the well-todo classes have a better chance of marrying whether they are sons or daughters. An only son can afford to marry earlier, and an only daughter can bring a better dowry.

In the second place a man or woman who has few brothers or sisters is likely to be better educated and to inherit more money, and therefore is likely to have a higher social position than if he or she came of a larger family, and is therefore likely to marry into a higher social class. So the higher social classes get recruits from the less fertile families of the classes below, and in exchange send down their more fertile members to the lower social classes.

Society will tend therefore to become graded according to fertility—the more fertile at the bottom and the less fertile at the top. Any able man who rises by his ability into a higher social class than that in which he was born will naturally marry into that class, and will be likely to have a less fertile wife and fewer children than his medium brother who remained in the class into which he was born.

If there were no such selection of the less fertile as parents of the upper classes, one might expect that their fertility would increase from generation to generation. For the more fertile in each generation would contribute a larger number to the next generation than the less fertile, and as the offspring would inherit their parents' fertility the average fertility of the second generation would be greater than that of the first, the average fertility of each generation would thus be greater than that of the preceding one.

This would not apply to the same extent in the case of the poorer classes, among whom large families usually suffer a relatively large reduction in numbers from infant mortality.

If then there were no selection of the less fertile as parents for the upper classes, we might expect the more able classes to multiply more rapidly than the less able, their greater fertility would probably outweigh the effect of the postponement of marriage.

But the contrary is certainly the case. That the wealthier classes do not maintain their numbers has been noticed by Polybius in Ancient Greece and by Tacitus in Ancient Rome. It has been observed among the wealthier citizens of Venice and Berne and in several English towns, and also in the English peerage and baronetage. It does not seem likely that this is due to deliberate limitation of the family. Attempts have been made to account for it by Sadler and Doubleday on the ground that abundance of food caused a reduction of fertility, and by Herbert Spencer as an illustration of his somewhat mystical doctrine of the antagonism of individuation and genesis, but these authors wrote before the facts of variation and heredity were familiar. Galton attributed the extinction of many British peerages to marriages with heiresses, but did not consider the wide reaching effects of such marriage selection. Alphonse de Candolle observed that marriages with heiresses were by no means confined to British peers, and considered that such marriages would be a cause of infertility among the upper classes. I think that the matter may be carried further, for even if men gave no deliberate preference to heiresses in selecting a wife, the fact that members of small families are likely to be of a higher social class would of itself cause the upper classes to be less fertile.

There must be some general cause which prevents the average intelligence in a civilised community from advancing beyond a certain point. That cause seems to me to be the grading of society according to a standard of wealth. This puts in the same class the children of comparatively infertile parents and the men of ability, and their intermarriage has the result of uniting sterility and ability.

When the parents are selected on account of the sexual abnormality of partial sterility, it might be expected that the children will be sexually abnormal in other ways. It seems possible to account in this way for the immorality which accompanies great periods of national development. This immorality is sometimes said to be the cause of the decline of great nations. It may be merely a symptom of the sterility which is the real cause of the decline.